

Age Seen in elderly patients 10–12 years older than intracapsular fracture neck femur.

Sex More common in females (2.8: 1).

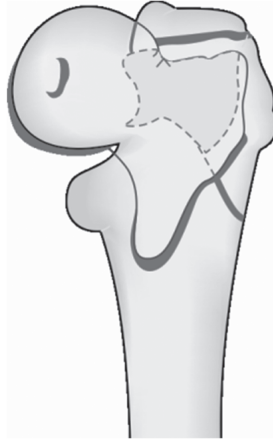


Fig. 3.34: Comminuted intertrochanteric fracture

Mechanism

Direct trauma to the trochanter as in RTA, fall, etc.

Indirect trauma due to violent muscle pull, etc.

How does it present? Clinical Features

The patient unlike in fracture neck of femur will have

- Marked pain
- Marked shortening of the lower limb
- Complete external rotation deformity
- Gross swelling
- Ecchymosis and
- Tenderness over the greater trochanter.

Radiograph

A true anteroposterior view in internal rotation and a lateral view help to study the fracture pattern (Fig. 3.35).

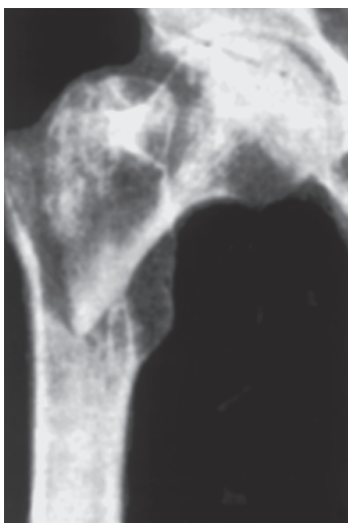


Fig. 3.35: Radiograph showing comminuted trochanteric fracture femur

How to manage these fractures? Treatment

Conservative treatment: There is 10 percent mortality associated with conservative treatment of this fracture.

Indications

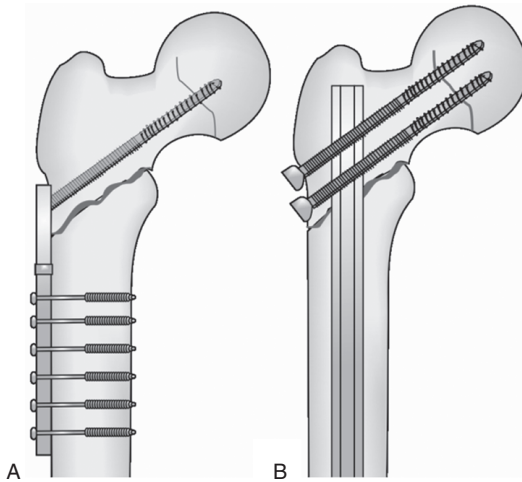
- Poor medical and surgical risk patients.
- Terminally ill patients.
- Very old patients.

Methods

- Simple support with pillows
- Buck's traction
- Plaster spica
- Skeletal traction through distal femur or tibia for 10–12 weeks (Fig. 3.36).

Surgical: Though not an emergency, there is an urgent need for surgery as there is a 10-fold increase in mortality if surgery is delayed for more than 48 hours.

plate like SP nail, etc. (Fig. 3.38A). Proximal Femoral Nailaing (PFN) is being preferred over DHS in recent times (See box).



Figs 3.38A and B: Internal fixation methods for trochanteric fractures (A) DHS, (B) PFN

What is new in the treatment of trochanteric fractures?

Proximal femoral nails (PFN) are emerging as an effective internal fixation device.

What are the problems of these fractures?

Complications

Due to the cancellous nature of bone, these fractures unite well unlike fracture neck femur.

- But malunion is quite common.
- Coxa vara
- Nonunion is less than 2 percent (rare)
- And traumatic osteoarthritis is seen.
- These fractures also carry a higher incidence of mortality (more than 10%).
- Avascular necrosis is very rare (0.8%).

Quick facts

In intertrochanteric fracture, the success of fracture implant fixation depends upon:

- Degree of osteoporosis (Singh's index).
- Fracture pattern.
- Accurate reduction.
- Implant designs.
- Placement of the implant.

Vital facts*Treatment of Proximal Femoral Fractures*

- Stable trochanteric fractures are fixed with DHS
- Unstable trochanteric fractures cannot be fixed with DHS as it cuts through due to comminution. Hence, the choice of implants in these situations is:
 - a. Medoff plate or trochanteric stabilization plate (TSP, AO).
 - b. *Condylcephalic nails*: These could be proximal femoral nails, Ender's nail or Gamma nail.
 - c. 95° condylar blade plate or dynamic condylar screw.
 - d. Proximal femoral nails (PFN) (Fig. 3.38B).

In comminuted unstable trochanteric fractures, IM nails are better suited to resist the deforming muscle forces. Hence, proximal femoral nailing is superior to DHS.

Advantages of PFN

- It can be inserted quickly
- Less blood loss
- Early ambulation
- Sliding and limb shortening is less
- It is more successful in reverse oblique fractures.

Features of PFN

- Standard length is 24 cm
- Long PFN is available in > 36 cm length (for low subtrochanteric fractures or two level fractures).
- *Proximal wide portion*: Here a long screw and hip-pin can pass through the head and neck.
- Distal part has a dynamic and static locking holes.

Problems with PFN

- Entry point has to be chosen carefully (preferably piriformis fossa).
- Excessively curved femur is a central indication.
- Postoperative thigh pain is seen
- It cannot be used if fracture line extends into piriformis fossa (Here DCS or condylar blade plate is better).